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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,064	08/31/2001	Gregory T. Gaudet	01048	8322

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EXAMINER

THERKORN, ERNEST G

ART UNIT

PAPER NUMBER

1723

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/944,064

Applicant(s)

GAUDET ET AL.

Examiner

Ernest G. Therkorn

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 11, 14-35, 37, 38, 44 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-13, 36, 39-43, and 46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-13, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of Mimori (U.S. Patent No. 5,476,989). At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in reciting use of an organic group and claims 12-13 further differ in reciting use of a temperature of less than 800<sup>0</sup> C. Mimori (U.S. Patent No. 5,476,989) (column 2, lines 15-24 and 53-56, column 4, lines 3-8, and column 4, line 60-column 5, line 20) discloses use of functional groups of a carbonized adsorbent allows selectivity. Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic. It would have been obvious to use functional groups in Ichikawa (U.S. Patent No. 5,270,280) because Mimori (U.S. Patent No. 5,476,989) (column 2, lines 15-24 and 53-56, column 4, lines 3-8, and column 4, line 60-column 5, line 20) discloses use of functional groups of a carbonized adsorbent allows selectivity. It would have been obvious to carbonize at 500<sup>0</sup> C in Ichikawa (U.S. Patent No. 5,270,280) because Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic.

Claims 1-10 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066

or Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391. At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in reciting use of an organic group. Abstract of JP 02193066 discloses binding functional groups to carbon particles. Holmes (WO 95/01838) (page 1, lines 1-4 and the sentence bridging pages 1 and 2) discloses binding functional groups to carbon chromatography material enhances the selectivity of the adsorbent. Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances. It would have been obvious to use a functional group in Ichikawa (U.S. Patent No. 5,270,280) because Abstract of JP 02193066 discloses binding functional groups to carbon particles and because Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances. It would have been obvious to use a functional group in Ichikawa (U.S. Patent No. 5,270,280) because Holmes (WO 95/01838) (page 1, lines 1-4 and the sentence bridging pages 1 and 2) discloses binding functional groups to carbon chromatography material enhances the selectivity of the adsorbent and because Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066

or Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 as applied to claims 1-10 and 36 above, and further in view of either Mimori (U.S. Patent No. 5,476,989) or Abstract of JP 54041296. At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066 or Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 in reciting use of a temperature of less than 800<sup>0</sup> C. Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic. Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption. It would have been obvious to use a temperature of less than 800<sup>0</sup> C in Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066 or Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 either because Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic or because Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption.

Claims 39-43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of Mimori (U.S. Patent No. 5,476,989) as applied to claims 1-10, 12-13, and 36 above, and further in view of Dias (U.S. Patent No. 4,619,805). At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in view of Mimori (U.S. Patent No. 5,476,989) in reciting use of aqueous

solvent. Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin. It would have been obvious to use water in Ichikawa (U.S. Patent No. 5,270,280) in view of Mimori (U.S. Patent No. 5,476,989) because Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin.

Claims 39-43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of the either the Abstract of JP 02193066 or Holmes (WO 95/01838), Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391, and either Mimori (U.S. Patent No. 5,476,989) or Abstract of JP 54041296 as applied to claims 12-13 above, and further in view of Dias (U.S. Patent No. 4,619,805). At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in view of the either the Abstract of JP 02193066 or Holmes (WO 95/01838), Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391, and either Mimori (U.S. Patent No. 5,476,989) or Abstract of JP 54041296 in reciting use of aqueous solvent. Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin. It would have been obvious to use water in Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066 or Holmes (WO 95/01838), Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391, and either Mimori (U.S. Patent No. 5,476,989) or Abstract of JP 54041296 because Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28)

discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin.

Claims 41 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of Dias (U.S. Patent No. 4,619,805). At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in reciting use of aqueous solvent. Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin. It would have been obvious to use water in Ichikawa (U.S. Patent No. 5,270,280) because Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin.

Claims 39, 40, 42, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa (U.S. Patent No. 5,270,280) in view of Dias (U.S. Patent No. 4,619,805) as applied to claims 41 and 46 above, and further in view of either Mimori (U.S. Patent No. 5,476,989) or Abstract of JP 54041296. At best, the claims differ from Ichikawa (U.S. Patent No. 5,270,280) in view of Dias (U.S. Patent No. 4,619,805) in reciting use of a temperature of less than 800<sup>0</sup> C. Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic. Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption. It would have been obvious to use a temperature of less than 800<sup>0</sup> C in Ichikawa (U.S. Patent No. 5,270,280) in view of Dias (U.S. Patent No. 4,619,805) because Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows

carbon to become hydrophilic or because Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption.

The remarks urge that Mimori (U.S. Patent No. 5,476,989) is not directed to chromatography. However, the claims are directed to product claims and accordingly are not limited to chromatographic processes.

The remarks urge that Ichikawa (U.S. Patent No. 5,270,280) and Mimori (U.S. Patent No. 5,476,989) are directed to non-analogous art. However, both Ichikawa (U.S. Patent No. 5,270,280) and Mimori (U.S. Patent No. 5,476,989) are directed to separating agents. Accordingly, they are not directed to non-analogous art.

The remarks urge that Ichikawa (U.S. Patent No. 5,270,280) and Mimori (U.S. Patent No. 5,476,989) are not combinable. However, Mimori (U.S. Patent No. 5,476,989) (column 2, lines 15-24 and 53-56, column 4, lines 3-8, and column 4, line 60-column 5, line 20) discloses use of functional groups of a carbonized adsorbent allows selectivity. Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic. Accordingly, motivation exists to use functional groups in Ichikawa (U.S. Patent No. 5,270,280) because Mimori (U.S. Patent No. 5,476,989) (column 2, lines 15-24 and 53-56, column 4, lines 3-8, and column 4, line 60-column 5, line 20) discloses use of functional groups of a carbonized adsorbent allows selectivity. Motivation exists to carbonize at 500<sup>0</sup> C in Ichikawa (U.S. Patent No. 5,270,280) because Mimori (U.S. Patent No. 5,476,989)



(column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic.

The remarks urge that Abstract of JP 02193066 does not teach functional groups. However, the title of the Abstract discloses "activated carbon with non-polar or polar functional groups." The body of the Abstract further teaches "carboxyl groups" which are a polar functional group and octadecyl groups which are a non-polar functional group. Motivation exists to use a functional group in Ichikawa (U.S. Patent No. 5,270,280) because Abstract of JP 02193066 discloses binding functional groups to carbon particles and because Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances.

The remarks urge that the Abstract of JP 02193066 is not a proper reference. However, it is noted that the Abstract was submitted by applicant in his March 7, 2003 I.D.S. and that MPEP 706.02 does not preclude the use of Abstracts.

The remarks urge that Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 do not provide motivation for use of an organic group in Ichikawa (U.S. Patent No. 5,270,280). Holmes (WO 95/01838) (page 1, lines 1-4 and the sentence bridging pages 1 and 2) discloses binding functional groups to carbon chromatography material enhances the selectivity of the adsorbent. Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances. Motivation exists to use a functional group in

Ichikawa (U.S. Patent No. 5,270,280) because Holmes (WO 95/01838) (page 1, lines 1-4 and the sentence bridging pages 1 and 2) discloses binding functional groups to carbon chromatography material enhances the selectivity of the adsorbent and because Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 discloses on page 385 that affinants/functional groups are added to selectively adsorb substances.

The remarks urge that neither Mimori (U.S. Patent No. 5,476,989) nor Abstract of JP 54041296 provide motivation to use of a temperature of less than 800<sup>0</sup> C. However, Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic. Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption. Motivation exists to use a temperature of less than 800<sup>0</sup> C in Ichikawa (U.S. Patent No. 5,270,280) in view of either the Abstract of JP 02193066 or Holmes (WO 95/01838) and Mikes, Laboratory Handbook of Chromatographic and Allied Methods, pages 218-224 and 385-391 either because Mimori (U.S. Patent No. 5,476,989) (column 4, lines 4-10) discloses that carbonizing at 500<sup>0</sup> C allows carbon to become hydrophilic or because Abstract of JP 54041296 discloses that heating carbon black and a carbonisable binder at 500<sup>0</sup> C forms a support useful for adsorption.

The remarks urge that the Abstract of JP 54041296 is not a proper reference. However, it is noted that the Abstract was submitted by applicant in his March 7, 2003 I.D.S. and that MPEP 706.02 does not preclude the use of Abstracts.

The remarks urge patentability based upon the allegation that Dias (U.S. Patent No. 4,619,805) does not provide motivation to use an aqueous solvent in Ichikawa (U.S. Patent No. 5,270,280). First, the claims are directed to product claims. Accordingly, the claims are considered to read on the product of Ichikawa (U.S. Patent No. 5,270,280) without modification by using an aqueous solvent. In any event, Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin. Motivation exists to use water in Ichikawa (U.S. Patent No. 5,270,280) because Dias (U.S. Patent No. 4,619,805) (column 2, lines 24-28) discloses use of water allows carbon particles to be coated with binders and is used with phenolic resin.

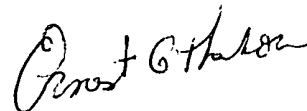
**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.

A handwritten signature in cursive script, appearing to read "Ernest G. Therkorn".

**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT  
July 15, 2003